

FAS – Office of Global Analysis (OGA)
United States Department of Agriculture (USDA)
International Operational Agriculture Monitoring Program



January Monthly Report

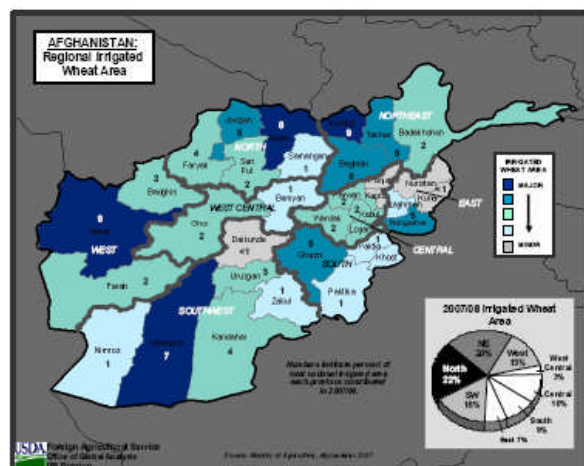
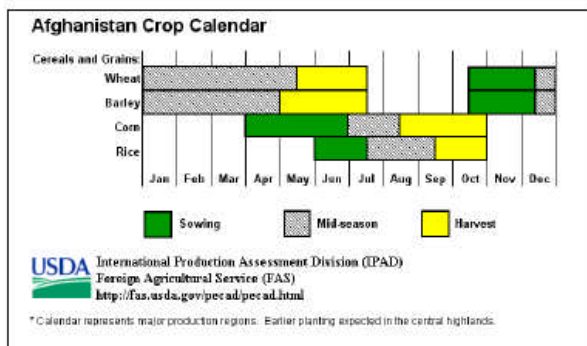
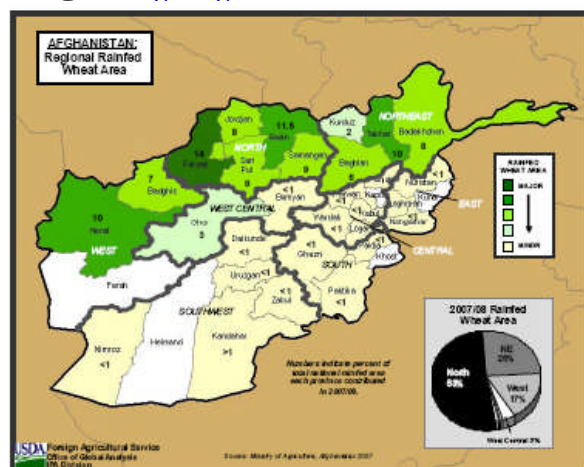
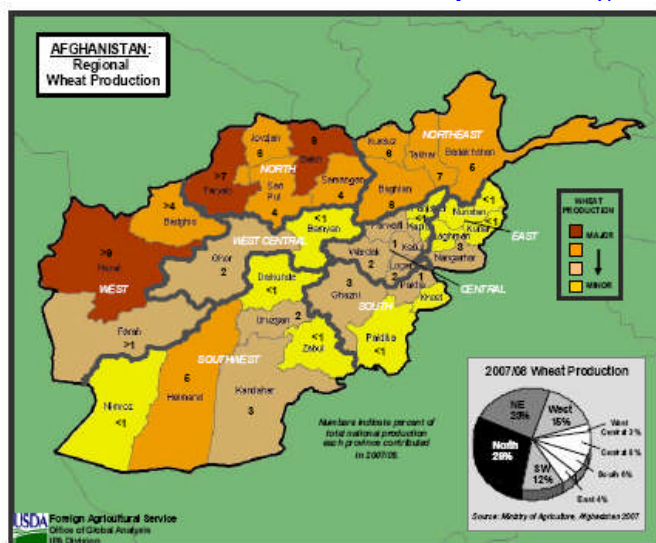
January 31st, 2008

1. Afghanistan grains are produced on irrigated and rainfed cropland (Figures 1 & 2). Although 90% of irrigated and rainfed cropland is planted during the winter season (October to December), some regions also produce a spring season crop. Approximately 80% of Afghanistan's total grains production is wheat.
2. Rainfed crop yields are extremely variable and almost strictly affected by seasonal precipitation, whereas the irrigated crop depends on additional snowmelt from the central highlands. However, recent analysis has suggested that snow cover alone should not be used as an indicator for irrigated crop production prospects. For example, last season (MY 2008/09) had the worst overall NDVI₁ for most of the northern rainfed and irrigated cropland when compared to previous seasons and the short-term average, but snow cover and snow depth were both significantly higher than average (Figure 3); seasonal rainfall was below normal. In contrast, MY 2007/08 had the best overall NDVI for the northern rainfed and irrigated cropland, but snow cover and snow depth were lower than most years. However, the near or better than normal seasonal precipitation during MY 2007/08 may have offset the snow deficit for the irrigated cropland areas (Figures 4 to 8₂). Furthermore, Afghanistan has limited water storage capacity due to a destroyed or degraded infrastructure; therefore rate and timing of snowmelt is crucial for the irrigated crop irrespective of the amount of snow.
3. Seasonal and recent decadal cumulative precipitation for MY 2009/10 is near normal or better than normal for most of the Northwest, Northeast, East, and South Regions. Rainfall remains below normal in portions of the Northwest, North and Southwest regions (Figure 9).
4. Snow cover area as of January 25th, 2009 is slightly below the short-term average and overall snow depth remains well below the short-term average (Figure 10).
5. Due to adequate rainfall in most of the regions, the current production outlook for the rainfed crop is better than the previous year (~ 70% of rainfed wheat area), with the exception of Faryab, Sari Pul, and Samangan provinces of the North region (~ 32% of rainfed wheat area). The same crop prospects or expected for the irrigated crop with the exception of Farah province in the Northwest region (~ 2% of irrigated wheat area); Faryab, Sari Pul, and Samangan provinces of the North region (~ 7% of irrigated wheat area); and Hermand and Uruzgan provinces of the Southwest region (~10% of irrigated wheat area). However, the current crop prospects for the irrigated cropland can change rapidly if seasonal rainfall becomes inadequate and unable to offset the snowpack deficit. Large irrigated regions such as Helmand that are currently lacking both adequate seasonal rainfall and snowmelt would be expected to do worse than the previous year.

¹ Normalized Difference vegetation Index (NDVI) is positively related to crop abundance and yield.

² MY 2009/10 refers to the current crop season. NDVI for the current season will not be available until crop emergence.

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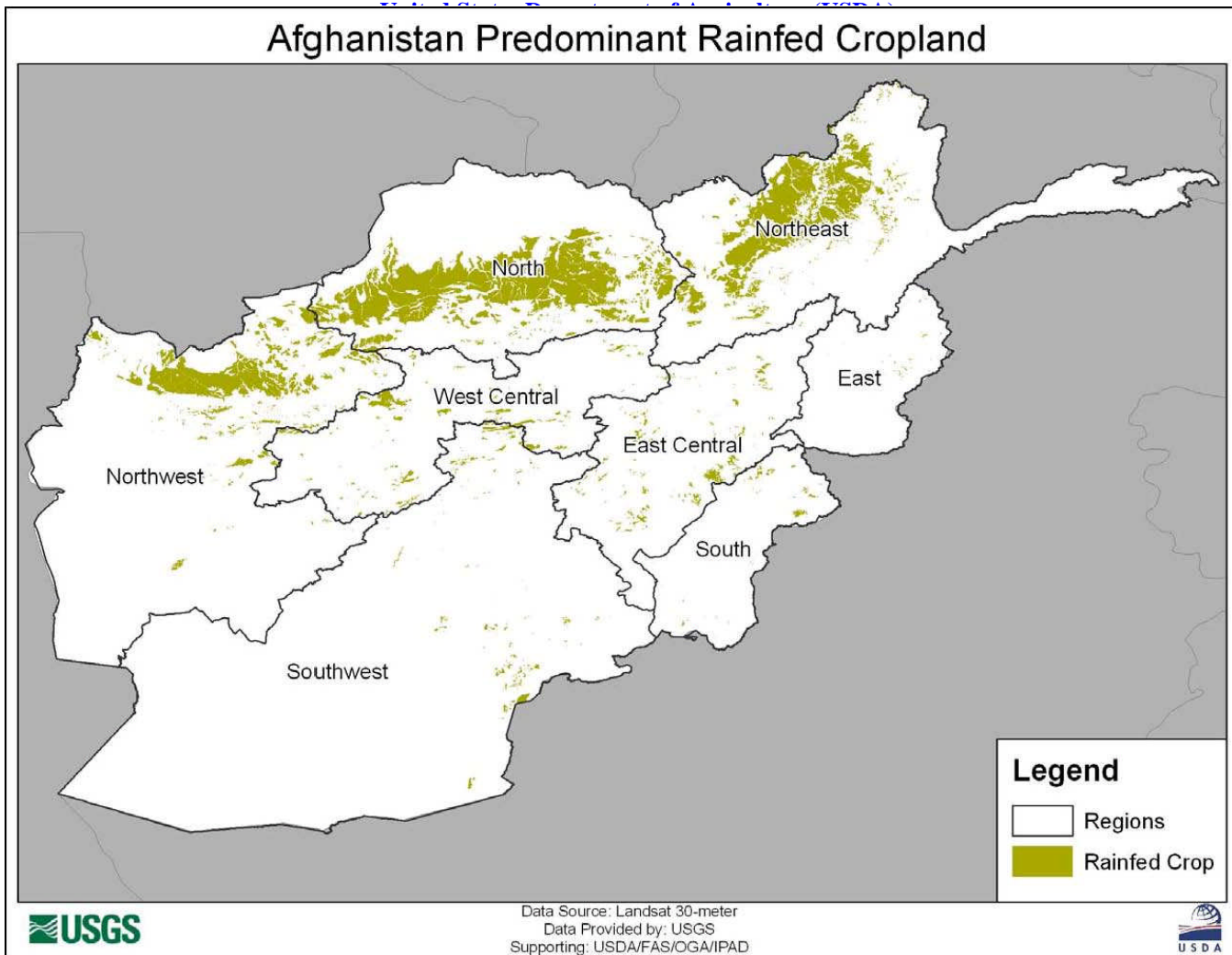


Figure 1: Rainfed cropland map derived from USGS Landsat classification.

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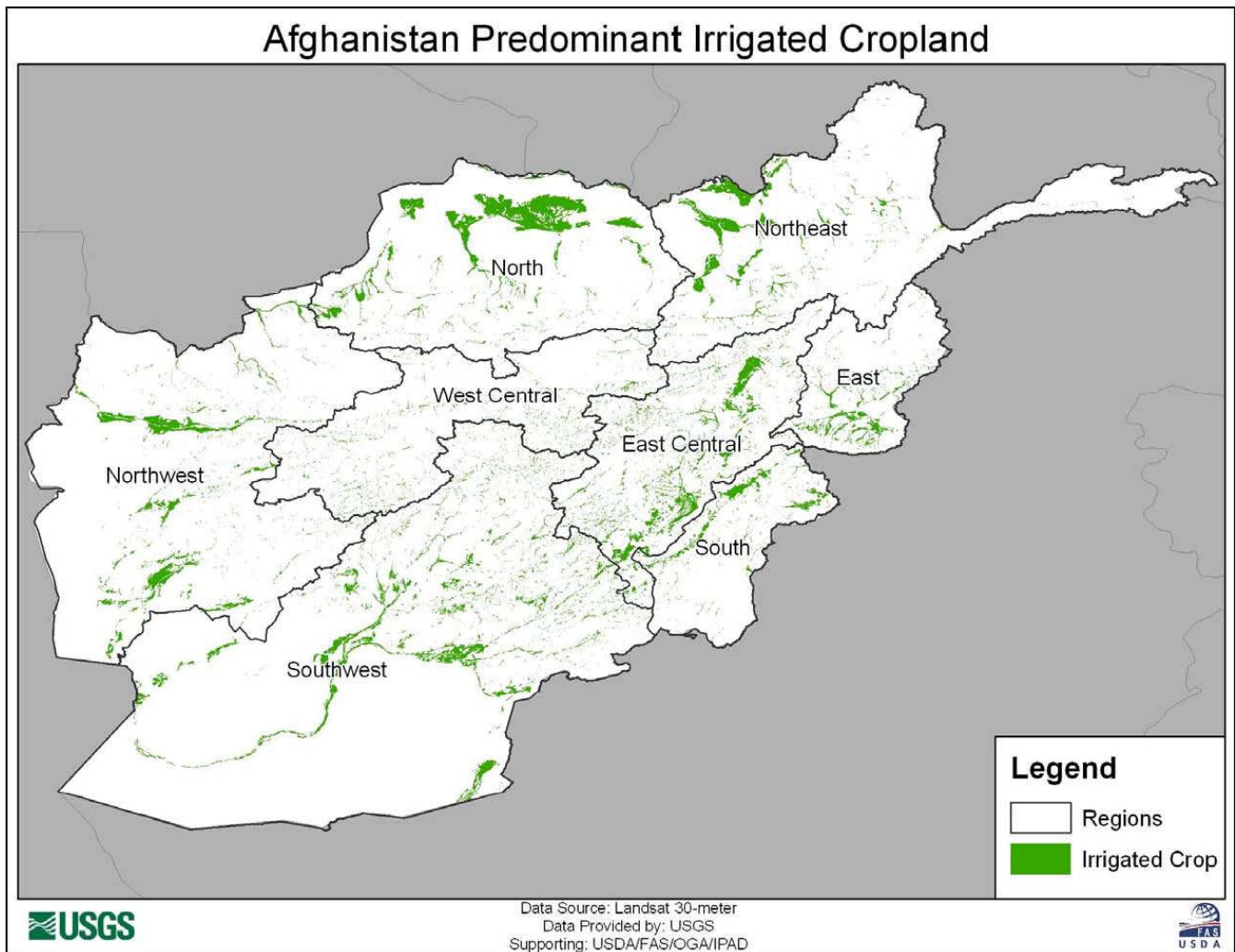


Figure 2: Irrigated cropland map derived from USGS Landsat classification.

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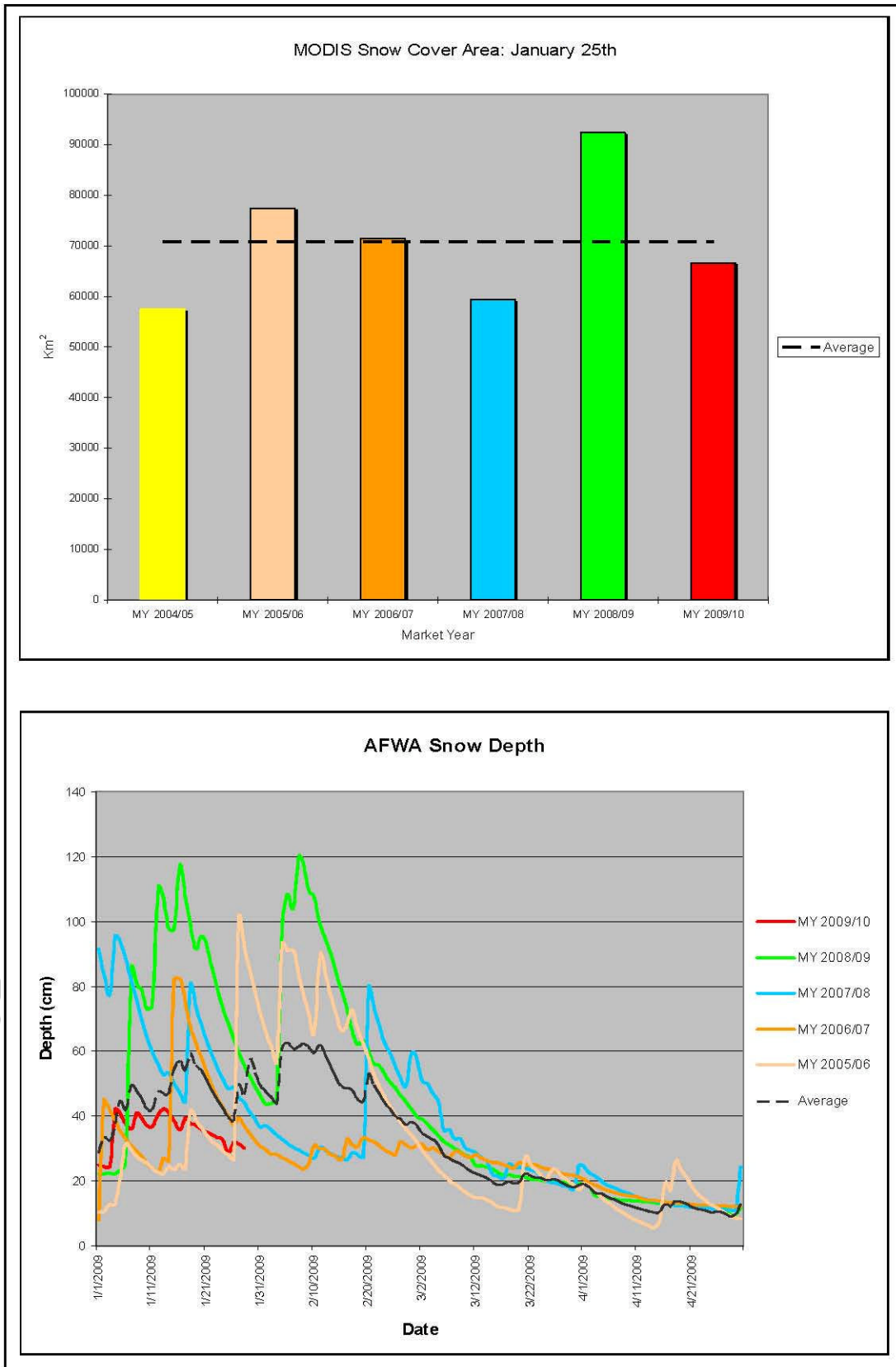


Figure 3: Snow cover area and snow depth from MY 2004/05 to MY 2009/10.

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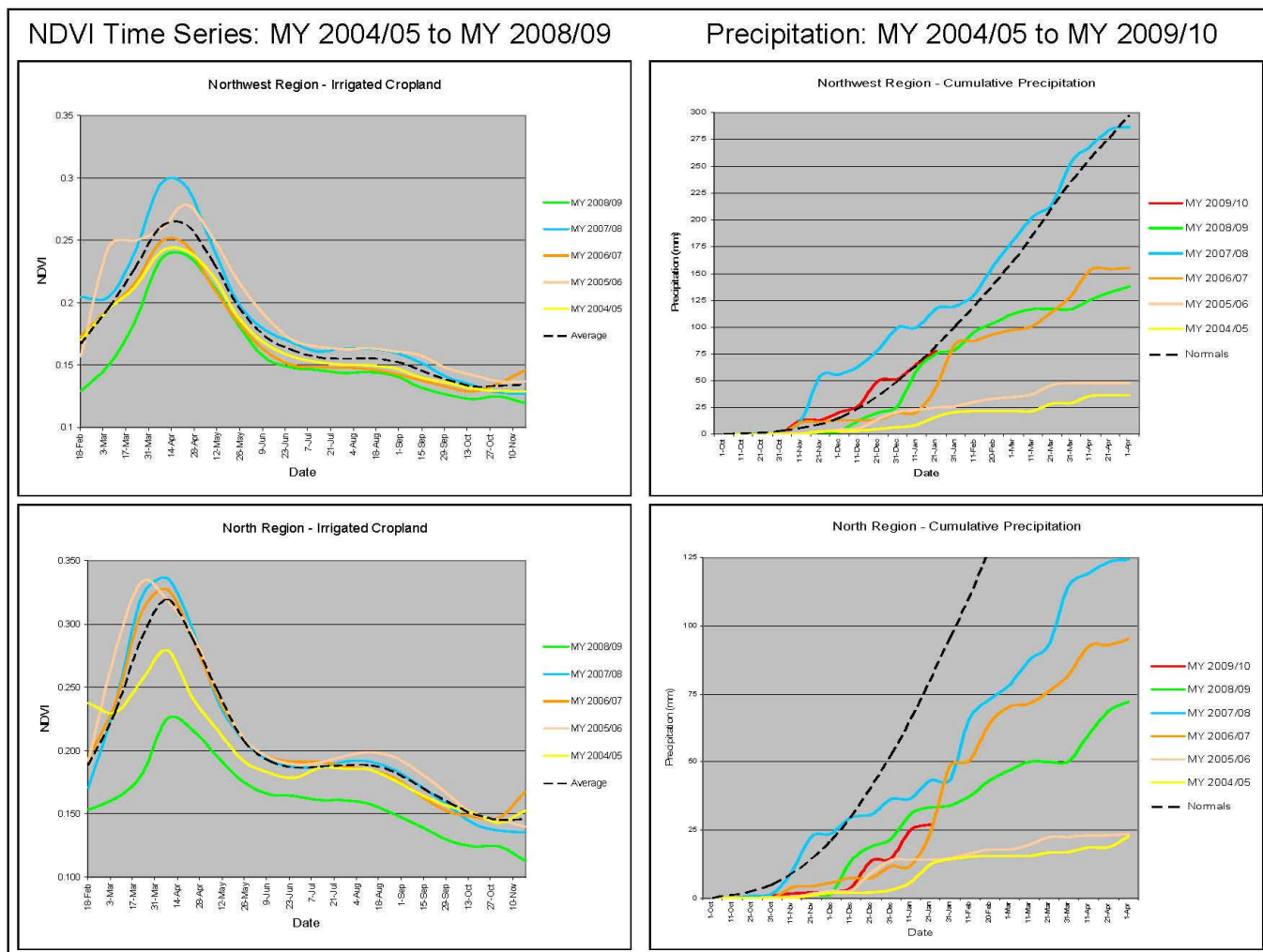


Figure 4: NDVI and cumulative precipitation time-series graphs for the Northwest and North regions irrigated crop.

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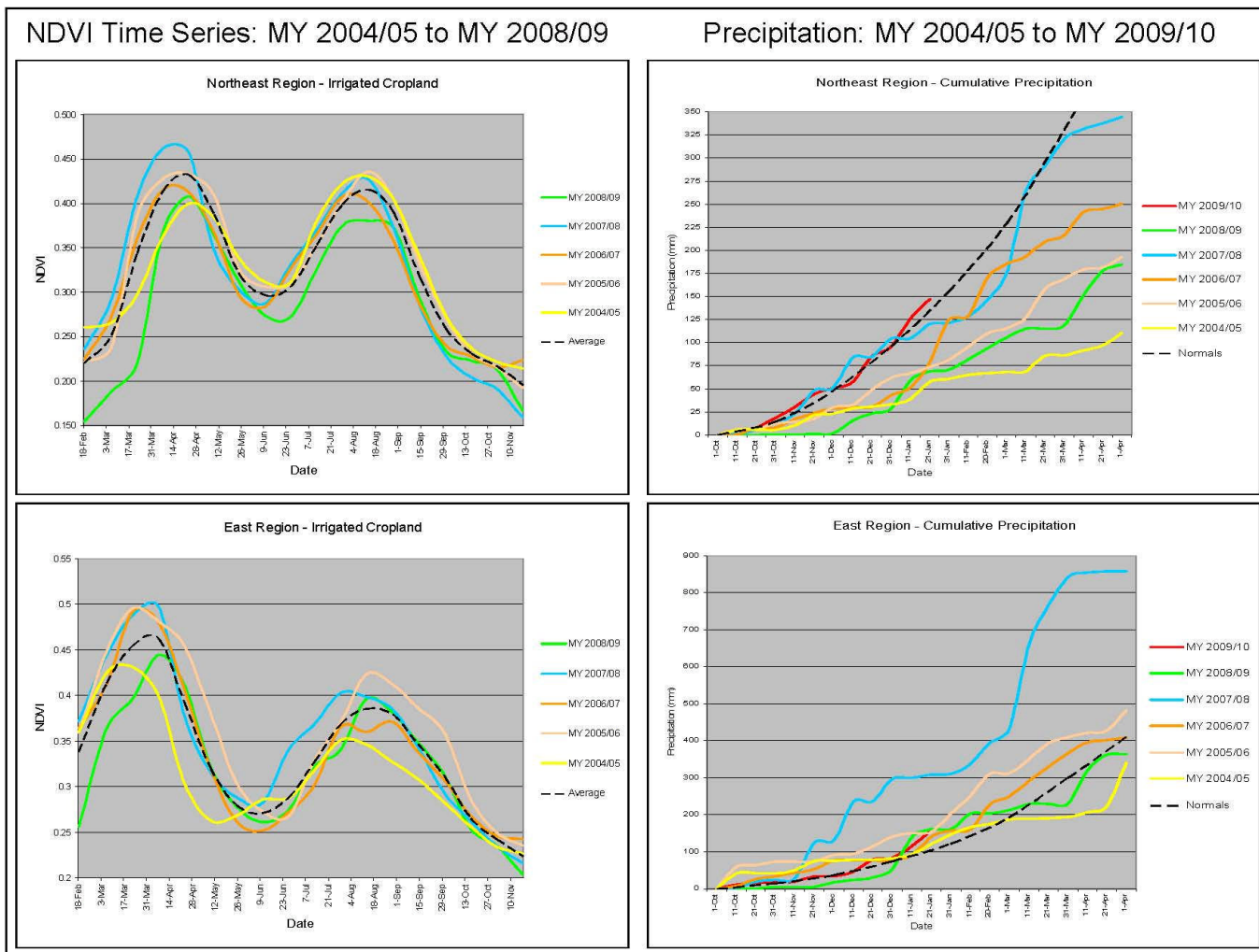


Figure 5: The second NDVI peak represents the spring crop season.

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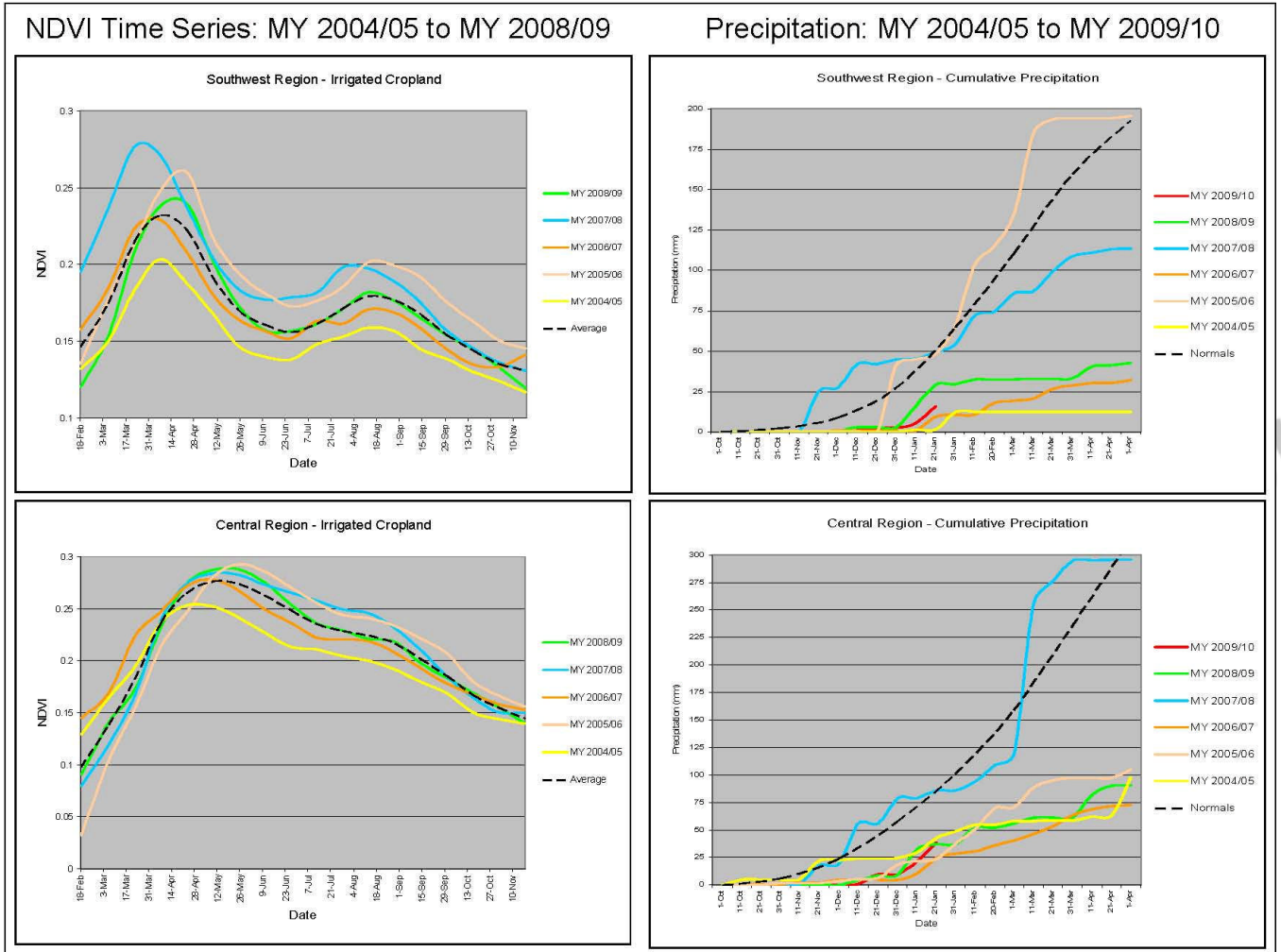


Figure 6: Central region NDVI peaks later due to higher elevation, cooler temperatures, late snow melt, and longer growing degree days.

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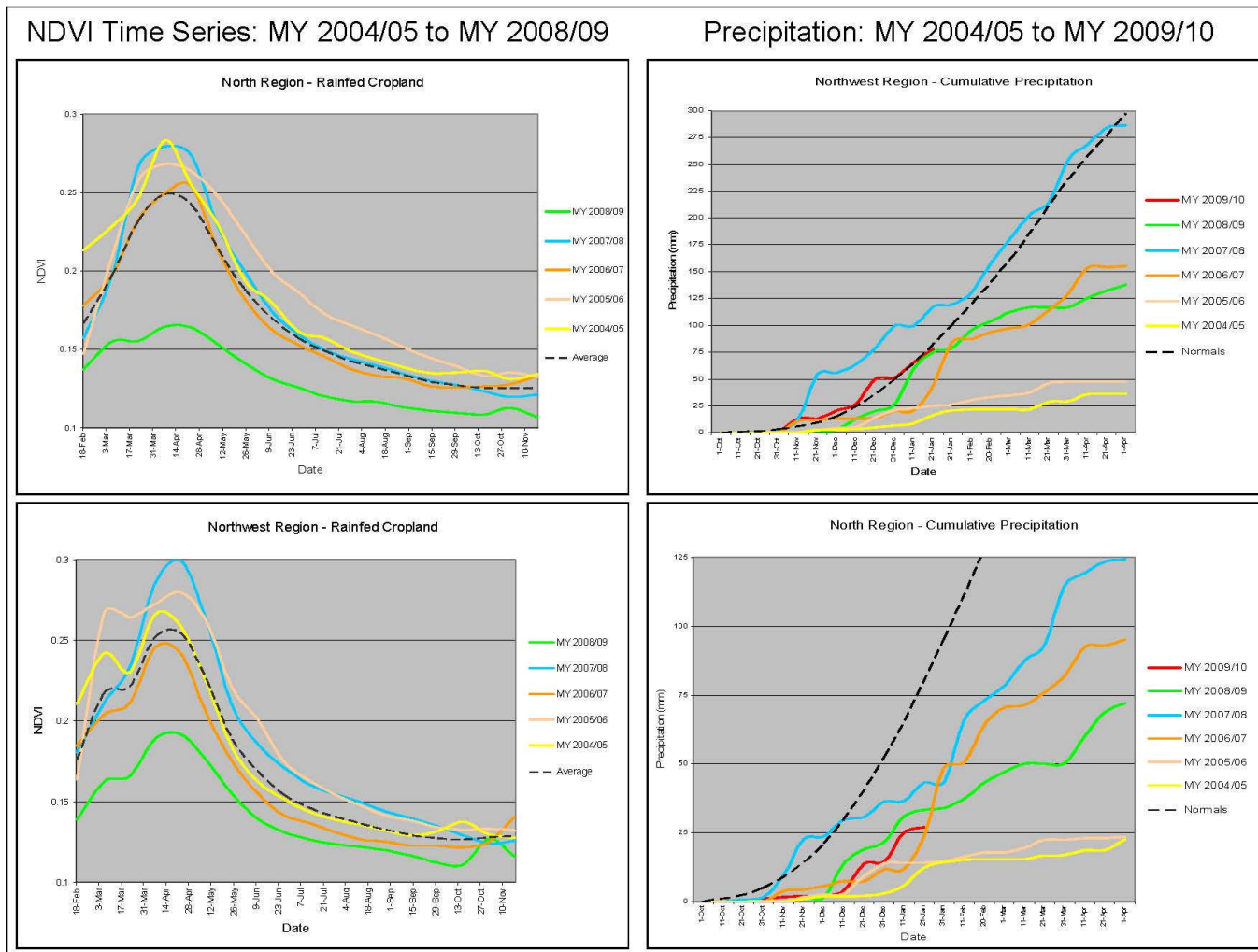


Figure 7: NDVI and cumulative precipitation time-series graphs for the Northwest and North regions rainfed crop.

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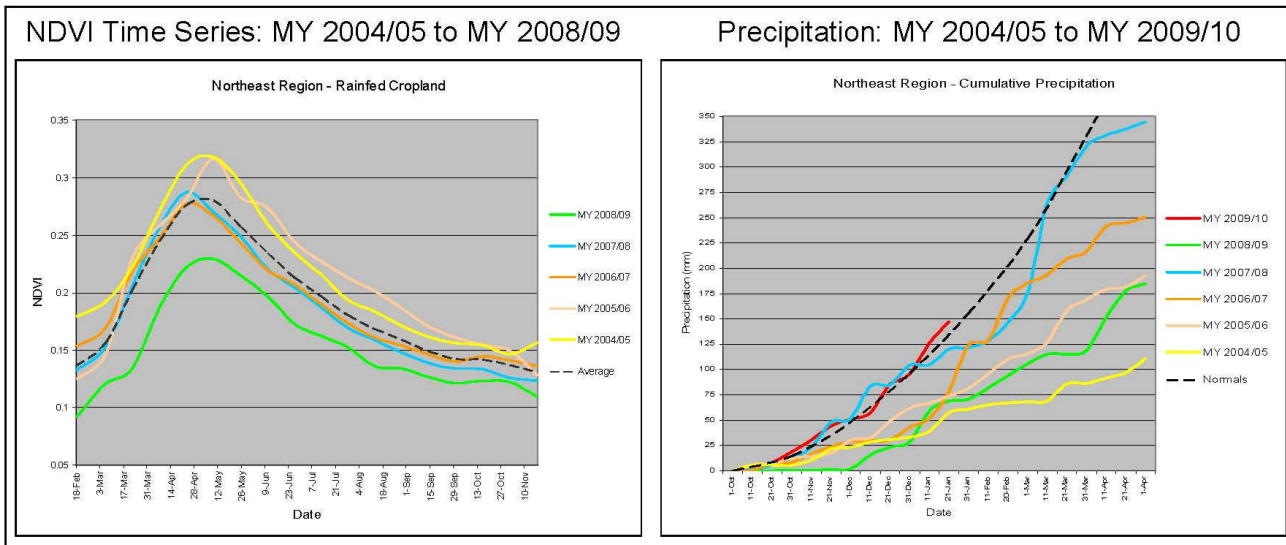


Figure 8: NDVI and cumulative precipitation time-series graphs for the Northeast region rainfed crop.

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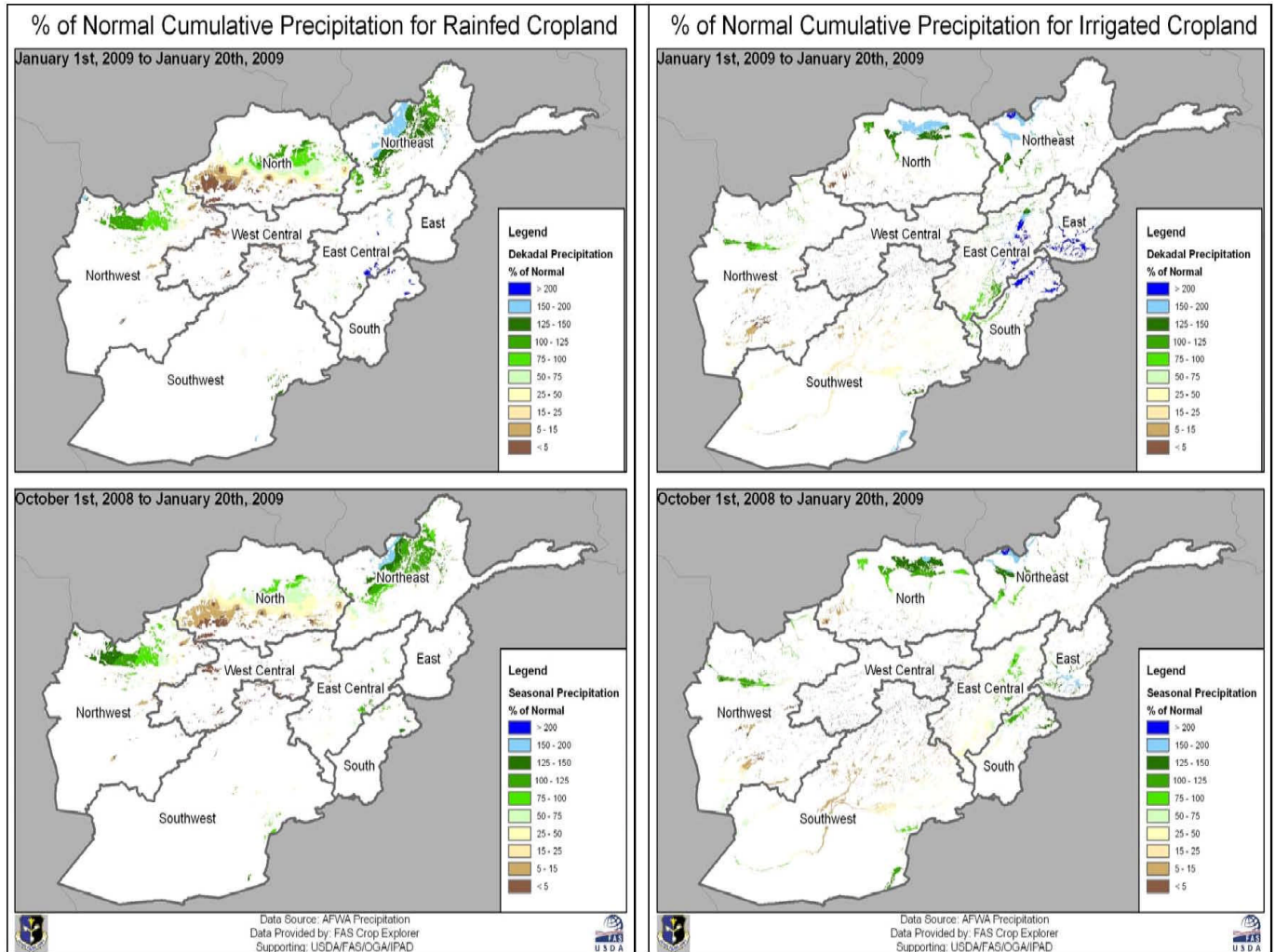


Figure 9: Decadal and seasonal cumulative precipitation for rainfed and irrigated cropland.

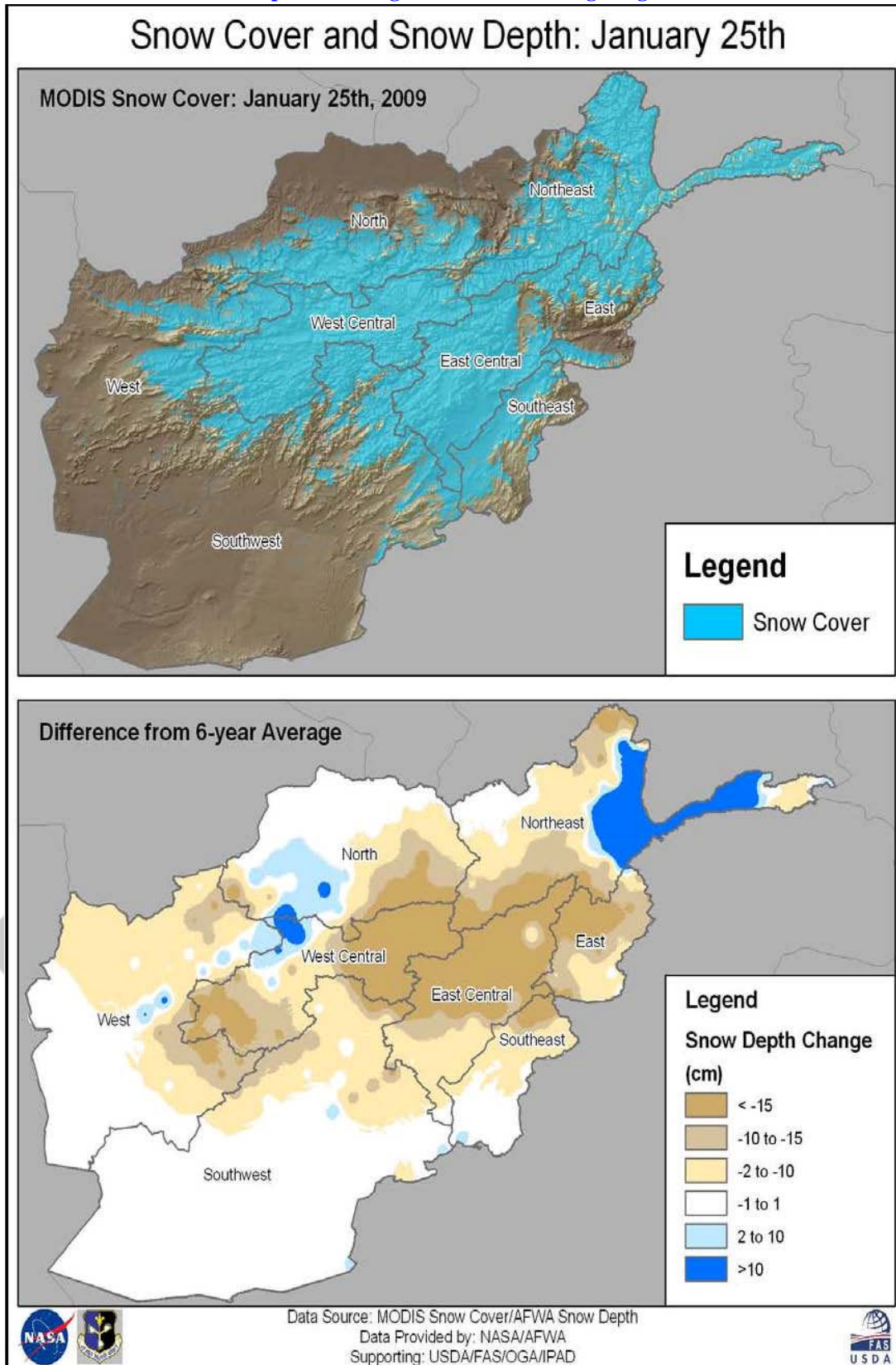


Figure 10: Current snow cover and snow depth change from the short-term average.

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